

Yu WANG
Appl. No. 09/935,735
March 24, 2004

REMARKS

Reconsideration of this application is respectfully requested. The continued allowance of claims 4-6 and 26-28 is appreciated.

An earlier version of this amendment was submitted on March 4, 2004, but was not entered. This version of the amendment is being filed with the request for continued examination (RCE) and includes remarks to respond to the Advisory Action of March 18, 2004. In particular, the term "aperture" (rather than "channel") has been included in new claim 33. Figure 4 shows an exemplary apertures 55 as the white boxes surrounding each of the tension bars 35. See Spec. para. 0038. In addition, the term "axis" now in all claims has been defined as a "rotational" axis of the core.

The rejection of claims 1 to 3 and 7 to 10 under 112, first para., and as lacking written description as been overcome by deleting from claim the limitation regarding thermal isolation. In place of thermal isolation, claims 1 and 23 have been amended to recite that the winding support is separated from the core sections by a gap.

That gap is the vacuum space in the aperture 55 between the winding support tension rod 35 and the walls of the opposite slots 53 of adjacent core sections 44, 46. [Specification paragraph 0038]. The aperture 55 is defined by the opposite slots of the rotor core sections.

The rejection of claims 23-25 and 29 as being anticipated by Laskaris (U.S. Patent No. 3,991,333 - Laskaris '333) is traversed. Laskaris '333 discloses a rotor core formed by a stack of pole segments (24, 25), support plates (20-23), windings (12-16) and

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winding housings (32-36). The rotor core is formed by the pole segments, support plates and winding housings. There is no separate winding support. A bolt (38) extends perpendicularly through holds in the stack of pole segments, support plates and winding housing to hold the rotor stack together.

There is no anticipation because Laskaris '333 does not disclose:

- A winding support extending between opposite slots of adjacent rotor core sections and opposite ends of the support attached to the windings.
(Independent Claims 1, 23, 33 and 40). Laskaris '333 shows a bolt that extends through holes (not opposite slots) in the rotor and winding housings that extends around the winding, rather than between opposite winding sides. A coil winding support extending between opposite sides of the winding, wherein opposite ends of the winding support are attached to the opposite sides of the winding. (Claim 23). In Laskaris '333, there are no "ends" of a winding support that attach to the winding. In Laskaris '333, winding housings (34, Fig. 4A) form an outer frame around the coil winding, and are not between the windings.
- Rotor core sections are arranged generally perpendicularly to the rotor core rotational axis. (Claims 1, 29 and 38). Perpendicular to the core axis means that the plane of each core section is generally perpendicular to the rotational axis.

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- A winding support is separated from the rotor core by a gap formed by the slots in the core (Claims 1, 7 and 24).
- Rotor core sections coaxial with the rotational axis of the rotor core (claims 2, 24, 38 and 46). The rotor core sections of Laskaris '333 are parallel to the rotor core and are not coaxial with the rotor.
- Opposite end core sections at opposite axial ends of the core, and a middle core section. (Claims 3, 25 and 39). The rotor core sections are stacked parallel to the core axis and are not at the axial ends of the core.
- Winding supports having tie rods that extend through the slots in the rotor core and have opposite ends that attach to the windings, wherein the tie rods are separated from the slots by a gap. (Claims 7 and 29).
- Rotor core sections each having a circular perimeter. (Claims 33 and 42).

The rejection of claims 1-3 and 7 as being obvious over Laskaris '333 in view of Abolins et al (3,942,053 – Abolins) is traversed for the same reasons as stated above. In particular, Laskaris '333 cannot be modified to thermally isolate the coil windings from the rotor core because the coil windings are layers of a stack that forms the core. It would not have been obvious to modify Laskaris '333 to form a gap between the rotor core and coil winding and winding support (as is done in the present invention for thermal isolation) because to so modify Laskaris '333 would cause the core to collapse. Moreover, Abolins does not suggest how to thermally isolate the winding shown in

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Laskaris '333 from the core. Accordingly, the obviousness rejection should be withdrawn.


The rejection of claims 8-10 and 30-32 as being obvious over Laskaris '333 in view of Driscoll et al. (U.S. Patent No. 6,169,353 - Driscoll) is traversed for substantially the same reasons as stated above. Dependent claims 8-10 depend on claim 1 and dependent claims 30-32 depend on independent claim 23. If independent claims 1 and 23 are allowable for the reasons stated above, then so should be their dependent claims.

All claims are in good condition for allowance. If any small matter remains outstanding, the Examiner is requested to telephone applicants' attorney. Prompt reconsideration and allowance of this application is requested.

Respectfully submitted,

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